

From the Field of Hetero-Chain Polyamides.

XIII. Mixed Polyamides Containing Sulfur

Atoms in the Principal Chain, by T. M. Frunze,
V. V. Korshak, 8 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol I, 1959, pp 293-300.

ATS-3241R

Sci

24 Mar 62

The Heterogeneous Polymerization of Sodium
Acrylate in the Presence of Other Salts, by
V. A. Kargin, V. A. Kabanov, G. P. Andrianova,
15 pp.

RUSSIAN, per, Vysokomolekulyarnaya Soedineniya,
Vol I, No 2, 1959, pp 301-307. 9670224

ATIC MCL-84971

Sci - Chem

161,357

Jul 61

Andreyeva, N. S.

THE RELATIONSHIP BETWEEN THE CONFIGURATION OF FIBROUS PROTEINS AND THEIR CHEMICAL STRUCTURE (O Svyazi Prostranstvennoy Struktury Fibril'nykh Belkov s ikh Khimicheskimi Stroyeniyem). Jan 61 [12]p. 24 refs. RTS 1596. Order from IC or SLA mi\$2.40, ph\$3.30 61-15643

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR) 1959, v. 1, no. 2, p. 308-314.

An analysis has been made of the dependence of the steric structure of the most important fibrous proteins on their chemical structure. Known polypeptide chain configurations of fibrous proteins are divided into two groups: those which are insensitive to the sequence of amino acids along the peptide chains, and those determined by a specific arrangement of amino acid residues. It has been shown that the first group, which includes all α -structures, may also include proteins with a statistical or almost statistical arrangement of (Chemistry--Organic, TT, v. 5, no. 7) (over)

61-15643

- I. Proteins--Analysis
1. Andreyeva, N. S.
- II. RTS-1596
- III. Department of Scientific and Industrial Research (Gt. Brit.)

148, 761

Office of Technical Services

The Role of Free Radicals in the Low-Temperature Cross
Linking (Vulcanization) of Rubber, by B. A. Dogadkin,
E. N. Belyayeva, 10 pp.

RUSSIAN, per, Vysokomol Soedin, Vol I, No 2, 1959,
pp 317-323.

PP

Sci - Chem

Apr 61

Kozlov, P. V. [Kubanov, V. A., and Prolova, A. A.]
CERTAIN CORRELATIONS IN THE DEVELOPMENT
OF UNIAXIAL DEFORMATION IN CRYSTALLINE
AND VITREOUS FILMS OF POLYETHYLENE
TEREPHTHALATE. [1960] 12p. 11 refs.
Order from LC or SLA ml\$2.40, ph\$3.30 60-18439

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 2, p. [324-329].

Polyethylene terephthalate was used to observe the
uniaxial deformation of film in the glassy condition and
of crystalline films. It was shown that the formation of
the so-called "neck" which can take place in "cold
stretching" of crystalline and in forced-elastic defor-
mation of amorphous polymers is governed not by
phase changes but has a purely relaxation character.
The results obtained can be interpreted on the basis of
the assumption of a "packet" structure of the crystal-
line and the amorphous polymers developed by Kargin,
Kitaigorodskii and Slonimskii (Kolloid. Zhur. 19; 131,
1957) (Author)

60-18439

- I. Ethylene polymers--
Crystal structure
I. Kozlov, P. V.
II. Kubanov, V. A.
III. Prolova, A. A.

143,034

Office of Technical Services

(Chemistry--Organic, TT,
v. 5, no. 3)

Chemical Grafting on Crystalline Surfaces, by V. A.
Kargin, N. A. Plate,

RUSSIAN, per, Vysokomol Soedineniya, Vol I, No 2,
1959, pp 330-331.

ATS RJ-2128

Sci - Chem

May 60

115,414

Ester-Chain Polyesters. XVII. Polyesters of
Phosphorus-Containing Dicarboxylic Acids, by
S. V. Vinogradova,

RUSSIAN, per, Vysokomol Soedineniya, Vol I, No 3,
1959, pp 357-361.

ATS RJ-2134
ATS-33L37R

Sci - Chem

Mar 60
Y

115420

115420 - Pargan... Pa

Kolesnikov, G. S. and Klimentova, N. V.
CARBON CHAIN POLYMERS AND COPOLYMERS. X.
BLOCK POLYMERIZATION OF METHYLMETHACRY-
LATE IN THE PRESENCE OF TRIBUTYLBORON.
May 61 [12]p. 3 refs. Technical notes FRL-TN-48;
AD-256 286.
Order from OTS or SLA \$1.60

61-19779

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 3, p. 362-366.

DESCRIPTORS: *Polymers, Synthesis, Molecular struc-
ture, *Acrylic resins, Polymerization, Methyl radicals.

The kinetics of block polymerization of methylmethacry-
late in the presence of tributylboron was studied, and
the effect of temperature and catalyst concentration on
the polymerization rate and on the molecular weight of
polymethylmethacrylate elucidated. (Author)

(Chemistry--Organic, TT, v. 6, no. 6)

61-19779

- I. Kolesnikov, G. S.
- II. Klimentova, N. V.
- III. Title: Block ...
- IV. FRL TN-48
- V. Feltman Research Labs.,
Picatinny Arsenal,
Dover, N. J.
- VI. Joint Publications Research
Service, New York
- VII. AD-256 286

176626

Office of Technical Services

Rafikov, S. R., Pavlova, S. A., and
Tverdokhlebova, L. L.

RELATIONSHIP BETWEEN THE PROPERTIES OF
SOLUTION AND POLYMER STRUCTURE. II. THE
APPLICATION OF PRECISION EBULLIOSCOPY IN
MOLECULAR WEIGHT DETERMINATIONS OF
POLYALUMINOORGANOSILOXANES, tr. by L. Gawronska.
Oct 60, 6p. 10 refs. Courtaulds Misc. Lit. 3231;
[DSIR LLU] M. 2675.

Order from OTS or SLA \$1.10

61-23519

Trans. of Vysokomol[ekulyarnye] Soedineniya (USSR)
1959, v. 1, no. 3, p. 400-403.

DESCRIPTORS: *Polymers, *Aluminum compounds,
*Organic compounds, *Silicones, Molecular weight,
Determination.

A highly sensitive ebulliometer is described in which
(Chemistry--Organic, TT, v. 6, no. 10) (over)

61-23519

- I. Rafikov, S. R.
- II. Pavlova, S. A.
- III. Tverdokhlebova, L. L.
- IV. Title: Application ...
- V. Courtaulds ML-3231
- VI. DSIR LLU M. 2675
- VII. Courtaulds Ltd.
(Cl. Brit.)

7530

Office of Technical Services

Kolesnikov, G. S., Rodionova, E. F., and Fedorova,
L. S.
CARBON-CHAIN POLYMERS AND COPOLYMERS.
XI. SYNTHESIS, POLYMERIZATION AND COPOLY-
MERIZATION OF ESTERS OF VINYLPHOSPHONIC
ACID. [1961] 6p.
Order from ATS \$11.65

ATS-57N56R

Trans. of Vysokomolekularnye Soedineniya (USSR)
1959, v. 1, no. 3, p. 367-372.
Another trans. is available from OTS or SLA \$1.60 as
61-18631 [1961] 12p.

DESCRIPTORS: *Polymers, Synthesis, Molecular
structure, Polymerization. *Phosphonic acids.

62-12157

- I. Kolesnikov, G. S.
- II. Rodionova, E. F.
- III. Fedorova, L. S.
- IV. ATS-57N56R
- V. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-PS-3092

Chemical Conversion of Polymers-II. Polyoxymethylene
of Polyamides, by S. R. Rafikov, G. H. Chelnikov
P. M. Gribkova, 11 pp.

RUSSIAN, per, Vysokomol Soedin, Vol I, No 3 1959
pp 373-386.

PP

Sci - Chem

Apr 61

63-10836

Mikhailov, N. V., Tokareva, L. G., and Fainberg, E. Z.

ON THE COMPATIBILITY AND MECHANISM OF STABILIZATION OF FIBER-FORMING POLYMER MIXTURES. 2 Nov 62 [14]p. 10 refs.

Order from OTS or SLA \$1.60

63-10836

I. Mikhailov, N. V.
II. Tokareva, L. G.
III. Fainberg, E. Z.

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1959, v. 1, no. 3, p. 404-409.

DESCRIPTORS: *Polymers, *Plastics, Fibers (Synthetic), Compatibility, Stabilization, Chemical bonds, Acetyl radicals, Cellulose compounds, *Vinyl chlorides, Nitrocellulose, Chlorination, Heat of solution.

The compatibility of the polymers diacetyl cellulose-chlorinated polyvinyl chloride and nitrocellulose-chlorinated polyvinyl chloride was investigated. The (Materials--Plastics, TT, v. 9, no. 12) (over)

Office of Technical Services

Polymer on the Basis of Bicyclo-2,2,1-Heptadiene, by
V. A. Kargin, H. A. Plate, L. A. Dudnik, 6 pp.

RUSSIAN, per, Vysokomol Soedin, Vol I, No 3, 1959,
pp 420-424.

PP

Sci - Chem

Apr 61

The Synthesis and Investigation of Hybrid Polymers.
I. Styrene and Isoprene Block Polymers Formed by
Catalytic Polymerization in Solution Under the
Action of Butyl Lithium, by A. A. Korotkov, L. A.
Shibayev, L. M. Pyrkov, 4 pp.

RUSSIAN, per, Vysokomol Soedin, Vol I, No 3, 1959,
pp 443-453.

PP

Sci - Chem

Apr 61

Polymerization of Glycidyl Methacrylate,
by I.A. Arbuzova, V.N. Efremova, 6pp.
RUSSIAN, per, Vysokomolekulyarnye Soedin,
Vol 1, No 3, 1959, pp 455-459.
CFSTI ATS-11R78R.

322,316

Sci - Chemistry
Mar 67

TT-63-23369

Gottlib, Yu. Ya.

INFRA-RED DICHROISM AND THE STRUCTURE OF
STEREOSPECIFIC POLYMERS. [1963] 10p 14refs
[BNSL] T. 1451 [DSIR] NLL M. 10106.

Order from OTS, SLA, or ETC \$1.10

TT-63-23369

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 3, p. 474-481. (Abstract available)

DESCRIPTORS: *Block polymers, *Molecular isomerism,
Stereochemistry, Methyl radicals, Infrared spectro-
scopy, *Dichroism, Molecular structure,

Comparison of the dichroic ratios for the bands of
certain characteristic vibrations of the CH_2 and CHR
groups in stereospecific polymers of the type $(-\text{CH}_2-\text{CHR}-)_n$
enables definite conclusions to be drawn about
the type of stereoregularity. Simple results were ob-
tained by neglecting the coupling between the vibrations
(Chemistry--Physical, TT, v. 11, no. 7) (over)

- I. Gottlib, Yu. Ya.
- II. BNSL T-1451
- III. DSIR NLL M. 1016
- IV. British Nylon Spinners Ltd.
London

NLL R/j 5828.4
1962 (1016) (Leon)

Office of Technical Services

Kochkin, D. A., Kotrelev, V. N. and others.
ORGANOTIN POLYMERS. [1961] 4p.

Order from ATS \$4.00

ATS-56N56R

Trans. of Vysokomolukulyarnye Soedineniya (USSR)
1959, v. 1, no. 3, p. 482-484.

DESCRIPTORS: *Polymers, *Metalorganic compounds,
*Tin compounds.

(Chemistry--Organic, TT, v. 7, no. 4)

62-12118

- I. Kochkin, D. A.
- II. Kotrelev, V. N.
- III. ATS-56N56R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

ATS 62-12118

Office of Technical Services

Investigation of the Dielectric Losses in Poly(Methyl Acrylate) and Poly(Vinyl Acetate), by L. V. Krasner, and G. P. Mikhailov, 7 p.

RUSSIAN, per, Vysokomolekulyarnye Soedineniya, Vol I, No 4, 1959, pp 542-548.

ATS-48T9OR

Sci-Chem
Jun 66

303,703

Investigation of the Dielectric Losses in Poly
(Methyl Acrylate) and Poly(Vinyl Acetate) by
L. V. Krasner, G. P. Mikhailov.
RUSSIAN, per, Vysokomolekul Sodin.
Vol 1, No 4, 1959, pp 542-548.
ATS-4902

Sci
Dec 68

368,768

Carbochain Polymers and Copolymers, XIV,
Copolymerization of Ethylene with Unsaturated
Compounds in the Presence of Alkyl Boron Compounds,
by H. S. Kolesnikor, A. P. Suprun, T. A. Soboleva,
8 p.

RUSSIAN, per, Vysokomolekul. Soyedineniya, 1979,⁵⁹
Vol I, No 4, pp 627-634.

SLA 60-10042

Sci
Apr 60
Vol III, No 3

112,086

Organophosphorus Polymers. VI. Polyamides of Some
Phosphorus-Containing Dicarboxylic Acids, by T. M.
Frunze,

RUSSIAN, per, Vysokomol Soedineniya, Vol I, No 5,
1959, pp 670-676.

ATS RJ-2133

Sci - Chem

May 60

115,419

Organophosphorus Polymers. VII. Mixed Phosphazenes
Containing Polyamides, by T. M. Frunze,

RUSSIAN, per, Vysokomol Soedineniya, Vol I,
No 2, 1959, pp 677-681.

ATS RJ-2135

Sci - Chem

May 60

115,421

TT-64-13710

Sharkov, B. I. and Levanova, V. P.
A STUDY OF THE PACKING DENSITY OF COTTON
CELLULOSE PREPARATIONS. [1963] 11p 3refs
Order from OTS, SLA, or ETC \$1.60 TT-64-13710

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 5, p. 730-737.

DESCRIPTORS: *Cellulose, Preparation, *Density,
Molecular structure, *Cellulosic plastics, *Rayon
fibers

(Materials: Textiles, TI, v. 11, no. 9)

I. Sharkov, B. I.
II. Levanova, V. P.

Office of Technical Services

Mechanical Breakage of Fibres, by A. V. Orlova.
RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol 1, No 5, 1959, pp 740-742.

GB/256/T.1044

Sci-~~Eng~~ Eng r
Mar 63

225,291

Korstylev, B. N. and Kozlov, P. V.
INVESTIGATION OF RELAXATION PROCESSES IN
CELLULOSE ESTER FILMS. 2 Nov 62 [14]p. 8 refs.
Order from OTS or SLA \$1.60 63-10840

Trans. of Vysokomol[ekulyarnye] Soed[ineniya] (USSR)
1959, v. 1, no. 6, p. 793-798.

DESCRIPTORS: *Cellulose esters, *Films, Surface
properties, Relaxation time.

As a result of a short thermal treatment of thin tri-
acetate films at high temperature, a significant im-
provement in their mechanical properties was found.
This treatment is connected with relaxation processes
occurring in the films which lead to a decrease in
internal stresses and to an increase in the packing
density of the molecular chains of the film-forming
substance. (Author)
(Materials--Plastics, TT, v. 9, no. 12)

63-10840

62-26507 7

I. Korstylev, B. N.
II. Kozlov, P. V.

REVERSE
TRANS
to
FRENCH

Office of Technical Services

Heterochain Polyamides. XII. The Relationship
Between Melting Point and Structure in Homologous
Series of Heterochain Polymers, by T. M. Frunze,
et al, 11 pp.

RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol I, 1959, pp 809-818.
No 6

ATB 3541R

ATC/AJ-1111

Sci - Chem

Feb 61

138,275

62-10105

Korshak, V. V., Gribova, I. A., and Andreeva, M. A.

A STUDY ON ORGANOPHOSPHORUS POLYMERS.
VIII. POLYESTERS OF PHOSPHONIC ACIDS AND
CERTAIN AROMATIC DIOXYCOMPOUNDS. [1961]
6p. 6 refs.

Order from OTS or SLA \$1.10 62-10105

Trans. of [Vysokomolekulyarnye Soedineniya] (USSR)
1959, v. 1, no. 6 [p. 825-828].

DESCRIPTORS: *Organic compounds, *Phosphorus
compounds, *Polymers, Esters, Phosphonic acids,
Acids, Quinones, Resorcinol, Propanes, Phenyl radi-
cals, Phenoxy radicals. Synthesis, Molecular structure,
Physical properties

Polyesters of methylphosphonic, phenylphosphonic and
phenoxyphosphonic acid and aromatic dioxycompounds;
(Chemistry--Organic, TT, v. 7, no. 9) (over)

I. Korshak, V. V.
II. Gribova, I. A.
III. Andreeva, M. A.
IV. Title: Polyesters...

Office of Technical Services

Birshcheyn, T. M. and Pitayn, O. B.
ON THE RELATIONSHIP BETWEEN THE STEREO-
SPECIFICITY IN POLYMERS AND THE CONDITIONS
OF POLYMERIZATION. [1960] 6p. 38 refs.
Order from LC or SLA m\$1.80, ph\$1.80 61-10359

Trans. of Vyssokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1 [no. 6] p. 846-851.

146,921

(Chemistry--Organic, TT, v. 3, no. 5)

61-10359

1. Polymers--Molecular structure
 2. Polymerization
 3. Stereochemistry
 4. Title: Stereospecificity
- I. Birshcheyn, T. M.
 - II. Pitayn, O. B.

Office of Technical Services

Boldreva, I. I., Dolgoplosk, B. A., and Krol, V. A.
REACTIONS OF ORGANOMETAL COMPOUNDS WITH
SALTS OF HEAVY METALS. III. REACTIONS OF
ORGANOALUMINUM COMPOUNDS WITH TITANIUM
HALIDES. 1 Nov 62, 13p. 12 refs.
Order from OTS or SLA \$1.60

63-10835

63-10835

- I. Boldreva, I. I.
- II. Dolgoplosk, B. A.
- III. Krol, V. A.
- IV. Title: Reactions...

Trans. of Vysokomol[ekulyarnye] Soed[ineniya] (USSR)
1959, v. 1, no. 6, p. 900-906.

Another trans. is available from OTS \$1.60 as
AD-273 126, Mar 62, 12p.

DESCRIPTORS: Synthesis, *Catalysts, Metalorganic
compounds, *Aluminum compounds, *Ethyl radicals,
*Titanium compounds, *Halides, *Complex compounds,
Catalysis, Polymerization, Stereochemistry, Molecular
isomerism.

A study was made of the products of the interaction of
the catalyst components used for producing stereo-
(Chemistry--Organic, TT, v. 9, no. 11) (over)

Office of Technical Services

Kargin, V. A., Gorina, A. A., and Koretskaya, T. A.
AN ELECTRON-MICROSCOPIC STUDY OF THE
MECHANISM OF THE SINTERING OF POLYTETRA-
FLUOROETHYLENE (FTOROPLAST-4). (1961) 7p.
Order from ATS \$10.40 ATS-74N53R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 8, p. 1143-1147.

DESCRIPTORS: *Ethylene, *Fluorides, Polymers,
Sintering, Optical analysis, *Electron microscopy.

(Chemistry--Organic, TT. v. 6, no. 8)

61-25333

1. Title: Ftoroplast-4
- I. Kargin, V. A.
- II. Gorina, A. A.
- III. Koretskaya, T. A.
- IV. ATS-74N53R
- V. Associated Technical
Services, Inc.,
East Orange, N. J.

ATC/AT-2006

5229

Office of Technical Services

Electron Paramagnetic Resonance Study of Radicals Formed
in Irradiation of Polyethylene With Fast Electrons,
by A. T. Koritskiy,

RUSSIAN, per, Vysokomol Soedineniya, Vol I, No 8,
1959, pp 1182-1193.

ATB RJ-2120

Sci - Chem

AEC D-4409

May 60

115,407

Selikhova, V. I., Markova, G. S., and Kargin, V. A.
A COMPARATIVE INVESTIGATION OF HIGHLY
ORIENTATED CRYSTALLINE AND AMORPHOUS
POLYMERS. [1963] [13p] 19refs [BNSL] T. 1561;
[DSIR] NLL M. 10489.

Order from OTS, SLA, or ETC \$1.60 TT-64-15263

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 8, p. 1214-1226.

(Physics--Solid State, TT, v. 12, no. 2)

TT-64-15263

- I. Selikhova, V. I.
- II. Markova, G. S.
- III. Kargin, V. A.
- IV. BNSL-T-1561
- V. DSIR-NLL-M. 10489
- VI. British Nylon Spinners
Ltd., London (England)

Office of Technical Services

Spirin, Yu. L., Gantmakher, A. R., and
Medvedev, S. S.
THE MECHANISM OF POLYMERIZATION IN THE
PRESENCE OF ORGANIC ALKALINE METAL COM-
POUNDS (O Mekhanizme Polimerizatsii Priuslovii
Organicheskikh Soyedinenii Shchelochnykh Metallov)
tr. by G. Belkov. 1960, 15p. 15 refs. Technical
trans. 911.
Order from NRCC \$1.00 NRCC C-3481

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 8, p. 1258-1264.
Another translation is available from ATS \$12.95 as
ATS-60M41R [1960] 8p.

151484

(Chemistry--Organic, TT, v. 3, no. 8)

61-12617

1. Polymerization--
Stimulation
 2. Organic compounds--
Catalytic properties
 3. Alkali metals--Catalytic
properties
 - I. Spirin, Yu. L.
 - II. Gantmakher, A. R.
 - III. Medvedev, S. S.
 - IV. NRCC TT-911
 - V. NRCC C-3481
 - VI. National Research
Council of Canada
- ATS-RJ-2655

Office of Technical Services

Kolesnikov, G. S. and [Fedorova, L. S.].
CARBOCHAIN POLYMERS AND COPOLYMERS. XII.
EMULSION POLYMERIZATION OF VINYL COM-
POUNDS IN THE PRESENCE OF TRIBUTYLBORON.
[1960] 8p. 6 refs.
Order from SLA mi\$1.80, pi\$1.80 60-18428

Trans. of [Vysokomolekulyarnyye Soedineniya] (USSR)
1959, v. 1 [no. 8] p. 1266-1269.

It was shown that the polymerization of acrylonitrile in emulsion and with the use of tributylboron as a catalyst takes place only in the presence of oxygen or an oxygen donor, for example hydrogen peroxide. Methylmethacrylate and styrene polymerize in the absence of oxygen with diminished yields below those in the presence of oxygen. The formation of compounds of a peroxide nature was shown qualitatively in emulsion polymerization of acrylonitrile in the presence of tributylboron and oxygen of the air and assumptions were made concerning their structure. A study was made of (Chemistry--Organic, TT, v. 5, no. 3) (over)

60-18428

1. Boron compounds (Organic)--
Chemical reactions
2. Vinyl polymers--Synthesis
- I. Kolesnikov, G. S.
- II. Fedorova, L. S.
- III. Title: Emulsion...

143,040

Office of Technical Services

61-15921

Golova, O. P., Krylova, R. G., and Nikolayeva, I. I.
MECHANISM OF THE THERMAL DECOMPOSITION
OF CELLULOSE IN A VACUUM. I. COMPARATIVE
STUDY OF THE THERMAL DECOMPOSITION OF
COTTON CELLULOSE AND CELLULOSE HYDRATE.
(O Mekhanizme Termicheskogo Raspada Tsellyulozy v
Vakuume. I. Sravnitel'noye Izucheniye Termi-
cheskogo Raspada Klopkovoy i Gidrattsellyulozy).
Feb 61 [14]p. 18 refs. RTS 1650.
Order from LC or SLA mi\$2.40, ph\$3.30 61-15921

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 9, p. 1295-1304.

A study was made of the products of thermal decom-
position, obtained at different stages of thermal action
on cotton cellulose in a vacuum. Two stages were
defined in the thermal decomposition of cotton cellu-
lose; the first stage covers the decomposition of the
first 10 - 20%, and the second stage includes that of
the following 70 to 80% of the specimen. A study was
(Chemistry--Organic, TT, v. 5, no. 8) (over)

- I. Cellulose--Decomposition
- I. Golova, O. P.
- II. Krylova, R. G.
- III. Nikolayeva, I. I.
- IV. Title: Comparative...
- V. RTS-1650
- VI. Department of Scientific
and Industrial Research
(Ot. Brit.)

151693

Office of Technical Services

61-12768

Korotkov, A. A., Miteengendler, S. P. and others.
SYNTHESIS OF POLYMETHYL METHACRYLATE
WITH REGULAR MICROSTRUCTURE. [1960] 8p.
Order from ATS \$11.00 ATS-70N48R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 9, p. 1319-1326.

161524

- I. Methyl acrylate--Synthesis
- I. Korotkov, A. A.
- II. Miteengendler, S. P.
- III. ATS-70N48R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 8)

Molecular Ordering of Polymers Precipitated
from Solution, by L. A. Igonin.

RUSSIAN, per, Vysokomolekul Soedin, Vol 1,
No 9, 1959, pp 1327-1332.

ATS RJ-4957

Sci-Mat
Feb 69

373,774

Molecular Orientation of Polymers Precipitated
From Solutions, by I. A. Igomin, et al.

RUSSIAN, per, Vysokomol Soedin, Vol 1,
No 9, 1959, pp 1327-1332

CSIRO

Sci - Chem
Oct 61

171, 387

Polymers With Conjugated Bonds in the Macromolecular
Chains. Part 2. Paramagnetism and Some Other Properties
of Polyvinylones, by A. A. Borlin,

RUSSIAN, per, Vysokomol Soedineniya, Vol I. No 9,
1959, pp 1361-1363.

AMS RJ-2125

Sci - Chem
CH

NLL R 5 1704

May 60

115,411

Preparation of Graft Copolymers III.
Grafting of Vinyl Monomers to Polyamides,
by V. V. Korshak, E. K. Mozgova, M. A. Sukolina,
6 pp.

RUSSIAN, per, Vysokomolekul Soyed, Vol. 7, No 2,
1972, pp 137-138. 0092916

MDW K-208

Sol
Nov 61

173, 472

A Study of the Polymerization of Styrene Molecular on Ziegler-Type Catalyst by the Method of Molecular Beams, by V. A. Kabanov;
V. P. Zubov, et al.

RUSSIAN, per, Vysokomolekulyarnyye Soyed,
Vol I, No 9, 1959, pp 1422-1427.

ATB-59M1R HTS-RS-2652

Sci
Vol IV, No 11
Jun 62

199, 238

The Light Aging of Polymethyl Methacrylate
I. Kinetics of Gas Evolution as Affected
by Light of Varying Wavelength, the Quantum
Yield of Photodegradation, by M. I. Prolova,
A. V. Ryabov.

RUSSIAN, per, Vysokomolekulyarnyye
Soyezdineniya, Vol I, No 10, 1979,
pp 1453-1455.

HTS-RJ-2681
ATB-53843R

Sci
Vol IV, No 9
Mar 62

187, 132

61-13701

Sorokin, M. P. and Shode, L. G.

GLYCID EETHERS POLYMERS. I. POLYMERISATION
OF PHENYLGLYCID EETHER UNDER THE ACTION
OF ALKALINE CATALYSTS AND INITIATING
AGENTS (Polimery Glitaynykh Yeffrov. I. Polimeri-
zatsiya Prostoogo Fenilglitsidnogo Yeffra pod Delatvi-
yem Shchelochnykh Katalizatorov i Initsiruyushchikh
Dobavok). [1960] 9p. 12 refs. M. 220x.

Order from LC or SLA m\$1.80, ph\$1.80 61-13701

Trans. of Vsesoyuznomoledkularnyye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1487-1492.

A new method is proposed for the formation of phenyl-
glycid ether polymers. Use is made of alkaline cata-
lysts (KOH, C_2H_5ONa , NaOH) and additions of initiat-
ing substances capable of rupture of the α -oxy ring.
The polymerization rate is dependent upon the type and
quantity of catalyst and upon the amount of initiator, as
well as upon the reaction temperature. A number of
polymers was isolated, split into fractions and analyzed
(Chemistry--Organic, IT, v. 5, no. 2) (over)

I. Ethers--Polymerization
1. Sorokin, M. P.
II. Shode, L. G.
III. Title: Polymerization
IV. DSIR L.L.U. M. 220x

142,852

Office of Technical Services

61-13702

Kolesnikov, G. S., Davydova, S. I., and
Yermolayeva, T. I.
CARBOCHAIN POLYMERS AND COPOLYMERS. XVII.
POLYMERIZATION OF DIALLYL DERIVATIVES OF
SILICON AND GERMANIUM (Karbonsepyye Polimery
i Sopolimery. XVII. Polimerizatsiya Diallilnykh
Proyzochnykh Kremniya i Germaniya). [1960] 4p.
8 refs. M. 2207
Order from LC or SLA mfl. 80. p51. 80 61-13702

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1493-1495.

Diallyl derivatives of silicon and germanium in pres-
ence of triethylaluminum and titanium tetrachloride
yield low molecular weight polymers. A structure is
proposed for the products obtained.

- I. Silicon compounds
Polymerization
2. Silicon compounds
(Organic)--Polymerization
3. Germanium compounds
(Organic)--Polymerization
- I. Kolesnikov, G. S.
- II. Davydova, S. I.
- III. Yermolayeva, T. I.
- IV. Title: Polymerization
- V. USSR. LUJ M. 2207

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 2)

Kochkin, D. A., Kotrelev, V. N. and others. ORGANOTIN MONOMERS AND POLYMERS (Olovoorganicheskiye Monomery i Polimery). [1960] 11p. 6 refs. M. 2210. Order from LC or SLA ml\$2.40, ph\$3.30 61-13705 Trans. of Vysokomolekulyarnyye Soyedineniya (USSR) 1959, v. 1, no. 10, p. 1507-1513. (Chemistry--Organic, TT, v. 5, no. 2)	61-13705 I. Tin compounds (Organic)-- Polymerization 2. Copolymerization 1. Kochkin, D. A. II. Kotrelev, V. N. III. DSIR LLU M. 2210 Office of Technical Services
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61-13703

Stavitskiy, I. K. and Borisov, S. N.
HYDROLYSIS OF DIMETHYLDICHLOROSILANE BY
SODIUM ALUMINATE SOLUTIONS (Gidroliz
Dimetildikhlorsilana Rastvorami Alyuminata Natriya).
[1960] 9p. 16 refs. M. 2208.

Order from LC or SLA ml\$1.80, ph\$1.80 61-13703

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1496-1501.

Experiments showed that in a strongly alkaline medium
the hydrolysis of dimethyldichlorosilane by aqueous
sodium aluminate solutions is accompanied by the
formation of polydimethylalumasiloxane polymers.
Their consistency depends upon the Si:Al ratios. Low
molecular weight pseudo-rubber unstable polymers
are formed on alkaline polymerization of oily poly-
dimethylalumasiloxanes. They do not possess the
properties of organosilicon elastomers.

(Chemistry--Physical, TT, v. 5, no. 2)

1. Silicon compounds
(Organic)--Hydrolysis
2. Sodium aluminates--
Chemical reactions
1. Stavitskiy, I. K.
- II. Borisov, S. N.
- III. DSIR LLU M. 2208

141, 184

Office of Technical Services

Polymerisation and Copolymerisation of Fluorinated
Styrenes, by A. R. Gantmakher, Yu. L. Spirin, 3 pp.

RUSSIAN, per, В Высокотеккулярные Соединения,
Vol I, No 10, 1959, pp 1526-1530.

OTS 61-13703

Sci

Sep 62

61-13714

Bessonov, M. I. and Kuvshinskiy, Ye. V.
CERTAIN FEATURES OF THE DESTRUCTION OF
ANNEALED POLYSTYRENE (O Nekotorykh
Ozobennostyakh Razrusheniya Zakalennogo Polistirola).
[1960] 7p. 6 refs. M. 2219.

Order from LC or SLA mi\$1.80, ph\$1.80 61-13714

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1561-1565.

Experiments showed that annealed specimens of
polystyrene fracture along large internal crevices.
The material filling the crevice remains on the frac-
ture surface, and can be removed in the form of a
thin film. The properties are explained by the packet
structure of the linear block polymers.

141, 161

(Chemistry--Organic, TT, v. 5, no. 2)

I. Styrene polymers--
Decomposition

I. Bessonov, M. I.

II. Kuvshinskiy, Ye. V.

III. DSIR LLU M. 2219

Office of Technical Services

Isotkov, Yu. D., Leshov, Ya. S., and
 (1960)

TUMES OF FREE RADICAL REACTIONS IN IRRADIATED POLYETHYLENE. I. THE
 DETECTION OF THE ELECTRON PARAMAGNETIC
 RESONANCE METHOD FOR THE INVESTIGATION
 OF THE COMPARISON OF RADICALS AND THE
 TERMINATION OF THE OXYGEN REACTION
 COEFFICIENT IN POLYETHYLENE OF THYLENE
 (Izucheniye Svobodnykh Radikalov v
 Polietilene Politetrafluoretilene. I. Primenyeniye
 Metoda Elektronnoy Paramagnitnoy Rezonansy dlya
 Issledovaniya Prevrashcheniya Radikalov i Opredeleniye
 Koeffitsiyenta Diffuzii Kisloroda v Politetrafluoretilene)
 M 2212

Order from LC or SLA in \$2.40, pb\$3.30 61-14707

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
 1959, v. 1, no. 10, p. 1519-1525

Another translation is available from LC or SLA
 in \$1.80, pb\$1.80, a: 60-16511 [1960] 10p.

(Chemistry--Physics, JT, v. 5, no. 2)

61-14707

1. Free radical-chemical reactions
2. Polyethylene polymerization
3. Effects of radiation
4. Atomic resonance applications
5. Oxygen diffusion
- I. Isotkov, Yu. D.
- II. Leshov, Ya. S.
- III. Vozvol'skiy, M. V.
- IV. (Publ. 14707 M 2212)

142,868

S. A. 60-16511
 Office of Technical Services

CEA-tr-R-1354 Uncl. (Card 2)

Yu. (Ju.) D. Tsvetkov, Ya. (Ja.) S. Lebedev,
and V. Voevodskii (Voevodskij). Translated
into French from Vysokomolekulyarnye
Soyedinenya, 1: 1519-25(1959). 23p. 9082385

Chemistry; Radiation Effects; Translations
MC-4

C-4 NP NSA Dep.(mc); \$2.60(fs), \$0.49(mf)
JCL or LC

N-8

Gantmakher, A. R., Spirin, Yu. L., and
Medvedev, S. S.
POLYMERISATION AND COPOLYMERISATION OF
FLUORINATED STYRENES (Gantmakher, A.
Soyuzestnaya Polimerizatsiya i Kopolimerizatsiya
[1960] 8p. 5 refs. M. 2213.
Order from LC or SLA mi\$1.80, ph\$1.80 61 .3708
Trans. of Vysokomolekulyarnyye Soedineniya (USSR)
1959, v. 1, no. 10, p. 1526-1530.

142,777

(Chemistry--Organic, TT, v. 5, no. 2)

61-13708

1. Fluorine compounds
(Organic)--Polymerization
2. Styrene--Polymerization
3. Copolymerization
- I. Gantmakher, A. R.
- II. Spirin, Yu. L.
- III. Medvedev, S. S.
- IV. DSIR L111 M 2213

Office of Technical Services

Gantmakher, A. R., Spirin, Yu. L., and
Medvedev, S. S.
POLYMERISATION AND COPOLYMERISATION OF
FLUORINATED STYRENES (Russian text in
Sovmestnaya Polimerizatsiya i Polimerizatsiya Stirolov).
[1960] 8p. 5 refs. M. 2213.
Order from LC or SLA m\$1.80, ph\$1.80 61-13708
Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1525-1530.

142,777

(Chemistry--Organic, TT, v. 5, no. 2)

61-13708

1. Fluorine compounds
(Organic)--Polymerization
2. Styrenes--Polymerization
3. Copolymerization
- I. Gantmakher, A. R.
- II. Spirin, Yu. L.
- III. Medvedev, S. S.
- IV. OSIP. LULU M. 2213

Office of Technical Services

Some Properties of Starch-Methyl Methyl
Methacrylate Graft Copolymers, by V. A.
Kargin, N. A. Plats, E. P. Rebinder.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 10, 1959, pp 1547-1551.

ATS-5243R

Att, K. 5.

194,303

Sci

Vol 4, No 10

May 62

Moyseyev, V. D., Neyman, M. B., and Kryukova, A. I.
 THERMAL DEGRADATION OF POLYPROPENE
 [Termicheskaya Destruktsiya Polipropilena]. [1961]
 8p. (5 figs. omitted) 8 refs.
 Order from LC or SLA m\$1.80, ph\$1.80 61-10983

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
 1959, v. 1 [no. 10] p. 1552-1557.
 Another translation is available from LC or SLA as
 61-13712, DSIR LLU M. 2217 [1960] 10p.

For abstract see Technical Translations 5: 114, 1961.

61-10983

- I. Propenes--Decomposition
- I. Moyseyev, V. D.
- II. Neyman, M. B.
- III. Kryukova, A. I.

15898.

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 11)

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61-13716

Usmanov, Kh. U., Aykhodzhaev, B. I., and
Amzov, U. O.
PREPARATION OF GRAFT COPOLYMERS OF
CELLULOSE BY IRRADIATION WITH Co-60
(Polucheniye Privyazki Sopliimerov Tsellyulozy
Oblucheniym Co-60). [1959] Sp. M. 2221.
Order from LC or SLA mi\$1.80, ph\$1.80 61-13716

Trans. of Vysokomolekulyaraye Soyedineniya (USSR)
1959, v. 1, no. 10, p. 1570.
Another translation available from LC or SLA
mi\$1.80, ph\$1.80 as 60-18467 [1960] 3p.

1. Cellulose--Polymerization
I. Usmanov, Kh. U.
II. Aykhodzhaev, B. I.
III. Amzov, U. O.
IV. DSIR LLU M. 2221

141/18

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 2)

Korshak, V. V., Mosgova, K. K., and Shkolina, M. A.
PREPARATION OF GRAFT COPOLYMERS. IV.
GRAFTING OF STYRENE TO POLYAMIDES. [1961]
[8]p. 3 refs.
Order from OTS or SLA \$1.10 61-20636

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1 [no. 11] p. 1573-1579.

DESCRIPTORS: Polymers, *Amides, Polymerization,
*Copolymerization, *Styrenes, Physical properties,
Chemical properties.

Graft polymers were obtained from ozone-treated poly-
caprolactam and mixed polyamide Anide G-669, and
styrene. Several physical and physico-chemical prop-
erties of graft polymers were studied. These differ
noticeably from the properties of the initial polyamides.
(Engineering--Chemical, ET, v. 7, no. 7) (over)

61-20636

I. Korshak, V. V.
II. Mosgova, K. K.
III. Shkolina, M. A.
IV. Title: Grafting ...

Office of Technical Services

Korshak, V. V., Zamyatina, V. A., and
Bekasova, N. I.

HETEROCHAIN POLYESTERS. XXV. INVESTIGA-
TION OF POLYCONDENSATION IN A THIN LAYER.
[1963] 8p. (figs. tables omitted) 6 refs.

Order from OTS or SLA \$1.10

63-18263

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 11, p. 1586-1592

DESCRIPTORS: *Polyester plastics, *Phthalates,
*Condensation reactions, Thin films, Reaction
kinetics, Catalysis, Heat of activation, *Ethylenes,
Glycols, Evaporation, Heat transfer.

Polycondensation of polyethyleneterephthalate in a thin
layer at atmospheric pressure was investigated. An
inverse dependence of the reaction speed on the thick-
ness of the layer of reacting substance was established.
(Materials--Plastics, TT, v. 10, no. 11) (over)

63-18263

I. Title: Polyethylene
terephthalate

I. Korshak, V. V.

II. Zamyatina, V. A.

III. Bekasova, N. I.

IV. Title: Investigation ...

Office of Technical Services

Degradation of Polyacrylonitrile by the Action
of an Ultrasonic Field, by B. R. Geller,
G. V. Goryachko, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol 1, No 11, 1959, pp 1610-1618.

ATS-60M4JR

194, 298

Sci
May 62

Vol 4, No 10

CEA-tr-R-1402 Uncl.

ETUDE DES RÉACTIONS DES RADICAUX LIBRES, DANS
LE POLYTETRAFLUORETHYLENE IRRADIÉ. II. DETER-
MINATION DES CONSTANTES DES VITESSES DE REAC-
TIONS SUIVANTES: $RO_2 \rightarrow \dot{R} + O_2$ ET $\dot{R} +$
 $O_2 \rightarrow RO_2$. (Study of Reactions of Free
Radicals in Irradiated Polytetrafluoroethylene.
II. Determination of Reaction Rate Constants
According to: $RO_2 \rightarrow \dot{R} + O_2$ and $\dot{R} + O_2 \rightarrow RO_2$).
Yu. D. Tsvetkov (Ju. D. Cvetkov), Ya. (Ja.) S.
Lebedev, and V. V. Voevodskii (Voevodskij).
Translated into French from Vysokomolekulyarnye
Soedineniya, 1: 1634-42(1959). 28p. (Includ-
es original, 9p.).

cont'd

Studies of Free Radical Reactions in Irradiated
Polytetrafluoroethylene. II. Determination of the
Rate Constant of the Reactions $RO_2 \xrightarrow{k} R + O_2$ and
 $R + O_2 \xrightarrow{k} RO_2$, by Yu. D. Tsvetkov, Ia. S. Lebedev,
V. V. Vovkovodskiy, 11 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 11, 1959, pp 1634-1642.

SLA 60-16526

Sci

190, 254

Apr 62

Vol IV, No 6

61-15744

Berlin, A. A. and Matveyeva, N. G.
POLYMERS WITH CONJUGATED BONDS IN THE
MACROMOLECULAR CHAINS. III. POLYAMINO-
QUINONES (Polimery s Sopryazhennymi Svyazami v
Tsoppyakh Makromolekyl. III. O. Polyaminokhinonekh).
Feb 61 [6]p. 2 refs. RTS 1705.
Order from LC or SLA m\$1.80, ph\$1.80 61-15744

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 11, p. 1643-1646.
Another translation is available from ATS \$7.50 as
ATS-83M40R [1960] 4p.

Polyaminoquinones were synthesized by the interaction
of chloranil with benzidine or hexamethylenediamine.
Polymerhomologous conversions are possible because
of the mobile halogen atoms in the quinone residues.
When reacted with metal salts, polyaminoquinones
form polymeric complexes, of apparently chelate
structure. The EPR spectra and the magnetic sus-
ceptibility of aromatic polyaminoquinones and their
(Chemistry--Organic, TT, v. 5, no. 8) (over)

- I. Quinones--Polymerization
- I. Berlin, A. A.
- II. Matveyeva, N. G.
- III. RTS-1705
- IV. Title: Polyaminoquinones
- V. Department of Scientific
and Industrial Research
(Gt. Brit.)

ATS/RS-2461
151665

Office of Technical Services

Polymers With Conjugated Bonds in Macro-
Molecular Chains. Part IV. Some Peculiar-
ties of Polymeric Compounds Containing
Hetero Atoms in a Conjugated Chain,
by L. A. Blyumenfel'd, A. A. Berlin, 5 pp.

RUSSIAN, per, Vysokomolekulyarnyy Soyedin,
Vol. 7, No 11, 1977, pp 1647-1651.

ATS-84MAOR

188,897

Sci

Mar 62

Vol. IV, No 2

Khazanovich, T. N.

THE EXCLUDED VOLUME IN THE THEORY OF
DEFORMATION OF SWELLED RETICULATED
(CROSS-LINKED) POLYMERS. [1951] 25p. (4 figs.,
omitted) 9 refs.

Order from LC or SLA n52.70, j54.80 61-10912

Trans. of Vysokomolekulyarnyye Soedineniya (USSR)
1959 [v. 1] no. 11, p. 1659-1666.

The free energy of the network of a swelled polymer was
calculated by assuming as chain model the "pair neck-
lace" earlier employed in studies on the volume effects
in polymer solution (Zhur. Tekh. Fiz. 29: 1437, 1958).
The application of procedures from the theory of real
gases is valid provided the correlation between the rela-
tive fluctuations of segment pairs decreases sufficiently
rapidly with increasing distance between them. It is
shown on a particular example that such a decrease does
take place. The dimensionless free energy expansion
factor is proportional to the mean number of segments
(Chemistry--Organic, IT, v. 5, no. 11) (over)

61-10912

1. Polymers--Solubility
I. Khazanovich, T. N.

100-10912

Office of Technical Services

Razuvaev, G. A., Minsker, K. S. and others.
EFFECT OF AMINES ON STEREOSPECIFIC POLY-
MERIZATION OF PROPYLENE. [1960] 5p.
Order from ATS \$9.65 ATS-61M45R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 11, p. 1691-1695.

147,073
ATS-RJ-2663

(Chemistry--Organic, TT, v. 5, no. 5)

61-12312

- I. Propenes--Polymerization
2. Amines--Chemical effects
- I. Razuvaev, G. A.
- II. Minsker, K. S.
- III. ATS-61M45R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

Plate, N. A., Prokopenko, V. V., and Kargin, V. A.
POLYMERIZATION OF CERTAIN MONOMERS
DURING DISPERSION OF INORGANIC SUBSTANCES.
[1962] 9p. (figs. omitted) 13 refs.
Order from OTS or SLA \$1.10

62-18818

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. I, no. II, p. 1713-1720.

DESCRIPTORS: *Inorganic substances, *Polymerization,
Molecular structure, Chemical reactions, Exchange
reactions, Polymers, Production, Dispersion
hardening.

62-18818

I. Plate, N. A.
II. Prokopenko, V. V.
III. Kargin, V. A.

Office of Technical Services

Polycondensation Reactions in the Solid Phase. II. Polycondensation of Aminoheptanoic Acid in the Solid Phase in the Presence of Catalysts, by A. V. Volokhina, G. P. Kudryavtsev.

RUSSIAN, per, Vysokomolekul Soedin, Vol 1, No 11, 1959, pp 1728-1732.

Chem Trans Sv 3092

321,785

Sci - Chemistry
Apr 67

Copolymerization of Vinyl Acetate with
Crotonamide and Methylcrotonamide, by
S. N. Ushakov, L. B. Trukhanova.
RUSSIAN, per, Vysokomolekul Soedin, Vol 1,
No 12, 1959, pp 1754-1757.
ATS RJ-4959

Sci-Mat
Feb 69

373,776

Synthesis and Study of Stereoregular Copolymers of
Propylene and Isoprene, by N. S. Volkova, G. V.
Khutareva, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 12, 1959, pp 1758-1763.

ASH-88A2R

ATS/RJ-2465

Sci

190,238

Apr 62

Vol IV, No 6

Studies in Coordination Chain Polymers

I. The Preparation of Polymers of bis-
(b-Diketones) and Metals, by V. V. Korshak,
Ye. S. Krongauz, et al, 9 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol I, No 12, 1959,
pp 1764-1771.

AKTS-18MB08
ATL/RJ-2441

Sci

Mar 62

Vol IV, No 2

188,894

Synthesis and Study of Stereoregular Copolymers of
Propylene and Isoprene, by N. S. Volkova, G. V.
Khutareva, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 12, 1959, pp 1758-1763.

ATS-88A2R

Sci

Apr 62

Vol IV, No 6

Berlin, A. A. [Tcherkashin, M. I.] and others.
POLYMERS WITH CONJUGATED BONDS IN THE
MACROMOLECULAR CHAIN. V. SYNTHESIS AND
SOME PROPERTIES OF POLYARYLVINYLENES.

17 Mar 60, [9]p. 2 refs.

Order from LC or SLA ml\$1.80, ph\$1.80 60-18468

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1 [no. 12] p. 1817-1820.

Phenylacetylene and p-diethynylbenzene are capable of polymerization and copolymerization on heating at 150 to 400°C or at 70°C in the presence of complexes of an aluminum trialkyl and $TiCl_4$ or $TiCl_3$. On increasing the polymerization temperature of phenylacetylene from 150 to 300°C, there is an increase in yield, molecular weight and viscosity of polyphenylvinylene; at the same time the polymer color changes from yellow to brown (300°C) and black (400°C). Polymers of phenylacetylene and p-diethynylbenzene and their copolymers have narrow EPR signals, a large concentration of paramagnetic particles (10^{17} to 10^{19} particles/g) and a high value of (Chemistry--Organic, TT, v. 5, no. 3) (over)

60-18468

1. Acetylenes--Polymerization
2. Title: Vinylenes
3. Title: Conjugated bonds
1. Berlin, A. A.
- II. Tcherkashin, M. I.
- III. Title: Synthesis...

142,989

Office of Technical Services

Guzeev, V. V., Morozov, V. I., Shtarkman, B. P.,
and Rylov, E. E.

AUTOMATIC APPARATUS FOR THE TURBIDOMETRIC
TITRATION OF POLYMER SOLUTIONS. [1963] 7p
(figs refs omitted)

Order from OTS, SLA, or ETC \$1.10 TT-64-10200

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 12 [p. 1840-1843].

(Chemistry--Analytical, TT, v. 11, no. 12)

TT-64-10200

I. Guzeev, V. V.
II. Morozov, V. I.
III. Shtarkman, B. P.
IV. Rylov, E. E.

Office of Technical Services

Studies on the Spherulite Structure of Polymers.
I. Degradation of Polymer Spherulites Under
the Action of Fast Electrons, by P. V. Kozlov,
Pan-tun Li, N. F. M. Bakeyev, 8 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyed, Vol I, No 12, 1959, pp 1848-1859.

ATS-89M42R

74-1042-102-11-11-2440
192,643

Sci
Vol IV, No 7
Apr 62

13 069

In-1

KABANOV V. A., KARGIN V. A., SERGEEV G. V.,
ZUBOV V. P.

Electron resonance study of polymerization in the acrylonitrile:
magnesium system obtained by molecular beam condensation

Vysokomol. Soed., 1, No. 12, 1859-1861 (1959)

379/60 - English

E u r a t o m

The Synthesis of Thermoreactive Copolymers of
Vinyl Acetate and Vinyl Alcohol with
Methylolcrotonamide, by S. N. Ushakov,
E. M. Lavrent'eva.
RUSSIAN, per, Vysokomolekul Soedin, Vol 1,
No 12, 1959, pp 1862-1867.
ATS RJ-4958

Sci-Mat
Feb 69

373.775

BD 12/60^h .

(SF - 1232).

60th Birthday of S. M. Lipatov, - *ff*

RUSSIAN, per, Vysokomolekularnyye Soyedineniya, No 12,
1959, pp 1868-1869.

JTRE 166

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Eior

27 Apr 61

Eleventh All-Union Conference on High-Molecular-
Weight Compounds, by N. F. Bakeyev, 23 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 1, 1959, pp 1877-1891.

JPRS 3552

Sci - Phys

Oct 60

VYSOKOMOLEKULYARNYE SOEDINENIYA
(Polymer Science USSR - monthly)
Translation begins with 1960, Vol. 1
Lag time: ca. 9 months
Order from: Pergamon Press, Ltd.,
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2-year price : £ 108.00
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Russ

NBS S-463104-68-D (TD 2 weeks) R-8947-D

28 Nov 67

The synthesis and basic properties of polyacrylate
esters of different degrees of polymerization

By: A.A. BERLIN

From: Vysokomolekuliarnyye Soedineniya Vol 2, No 3,
1960: 411-416 (6 pp)

Russian - est for wds:

Please translate and type 1 original and 1 carbon copy.
Document can be out.

Diffusion Coefficient and the Nature of
Diffusing Molecules, Pt. I, by R. M.
Vasenin.

RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol 2, 1960, pp 57-63.
SLA TT-66-10794

331, 506

Sci - Chem
Jul 67

62-13807

Korshak, V. V., Polyakova, A. M., and
Suchkova, M. D.
SYNTHESES DES COMPOSES VINyliQUES DU
PLOMB ET RECHERCHE DE LEUR POLYMERI-
SATION [The Synthesis of Vinyl Compounds of Lead
and a Study of their Polymerization] tr. by Szyzmau.
[1961] [22]p. 10 refs. CEA Trans. R 1413 (text in
French).

Order from OTS or SLA \$2.60

62-13807

Trans. in French of Vysokomol[ekulyarnye] Soed-
[inaniya] (USSR) 1960 [v. 2] no. 1, p. 13-19.

DESCRIPTORS: Synthesis, *Vinyl radicals, Dioxides,
Decomposition, *Polymerization, Copolymerization,
Styrenes, Ethyl radicals *Lead compounds, Methyl
radicals.

(Chemistry--Organic, TT, v. 7, no. 8)

(over)

I. Korshak, V. V.
II. Polyakova, A. M.
III. Suchkova, M. D.
IV. CEA-tr-R1413
V. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

Radiation Polymerization of Isoprene, Pt. ¹ 2.,
by V. S. Ivanov, M. A. Sokolova, 3 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol. II, No 1, 1960, pp 35-37.

AT

AT3-034455

203, 221

Sci

Jun 62

Deformation Properties of Polymers,
by Ye. Ye. Glukhov, A. A. Gorkina,
A. V. Shelion, 9 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol II, No 1, 1960,
pp 38-45.

ATC-53M4OR
ATC/15-2468

Sci
Mar 62
Vol IV, No 2

188, 898

Kabin, S. P. and Usyarov, O. G.
APPLICATION OF THE ULTRASONIC METHOD FOR
DETERMINATION OF COMPONENTS CONCENTRA-
TIONS IN MIXTURES OF POLYETHYLENE WITH
POLYPROPYLENE AND IN ETHYLENE/PROPYLENE
COPOLYMERS. [1961] 4p. 7 refs.
Order from OTS or SLA \$1.10

61-14972

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960 (v. 2) no. 1, p. 46-49.

DESCRIPTORS: *Polymers, *Ethylenes, *Propenes,
Copolymerization, Ultrasonics, Determination,
Mixtures.

(Materials--Plastics, TT, v. 6, no. 1)

61-14972

I. Kabin, S. P.
II. Usyarov, O. G.

161775

Office of Technical Services

Korshak, V. V., Vinogradova, S. V., and
Lebedeva, A. S.
HETEROCHAIN POLYESTERS. XXVI. SOME LAWS
GOVERNING POLYESTERIFICATION AT THE INTER-
FACE BOUNDARY. 27 Apr 60 [11] p. 13 refs.
Order from LC or SLA ml\$2.40, ph\$3.30 60-18472

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 1] p. 61-66.

Some laws were investigated governing the polyesterifi-
cation at the interface boundary. The yield of poly-
ester and its reduced viscosity increase with an in-
crease of the intensity of stirring of the reaction mix-
ture. The highest molecular weight of polyester was
obtained on adding a solution of isophthaloyl chloride in
p-xylene to an aqueous-alkaline solution of diene (0.1M
concentration) during 11 minutes at about 20°C, when
working with solutions of the starting substances with
the same concentration. (See also 60-12618)

(Chemistry--Organic, TT, v. 5, no. 3)

60-18472

1. Carboxylic acids--
Condensation
2. Phenols--Condensation
3. Esters--Polymerization
4. Title: Hetero-chain polymers
5. Title: Esterification
- I. Korshak, V. V.
- II. Vinogradova, S. V.
- III. Lebedeva, A. S.
- IV. Title: Some...

143,027

Office of Technical Services

Kolesnikov, H. S. and Matveyeva, N. G.
CARBOCHAIN POLYMERS AND COPOLYMERS. XX.
ON THE POLYMERIZATION AND COPOLYMERIZA-
TION OF 1-FLUORO-1,1-DICHLORO- AND 1,1-DI-
FLUORO-1-CHLORO-PROPYLENES-2. [1960] 6p.
13 refs.

Order from LC or SLA mi\$1.80, ph\$1.80 60-18470

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 1, p. 82-84.

The synthesis, polymerization and copolymerization of 1-fluoro-1,1-dichloro- and 1,1-difluoro-1-chloropropylene-2 were accomplished by the dehydrochlorination from 1-fluoro-1,1,3-trichloro-propane and 1,1-difluoro-1,3-dichloro-propane, respectively. The copolymers of 1-fluoro-1,1-dichloro- and 1,1-difluoro-1-chloropropylene with styrene have glass transition temperatures higher than the glass transition temperature of homopolymers which is explained apparently by the formation of fluorine-hydrogen bonds between the polymer chains. (See also 60-10042, 60-22806)

60 18470

- I. Propenes--Polymerization
- I. Kolesnikov, H.-S.-G. S.
- II. Matveyeva, N. G.
- III. Title: Polymerization...

143,028

143,028

Office of Technical Services
(Chemistry--Organic, TT,
v. 5, no. 3)

Investigation into the Mechanical Properties of
Polymers Undergoing Irradiation, Parts I and II,
by M. A. Moku'skiy.
RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol II, 1960, pp 103-118.
*AEC

Phye
May 64

CEA-tr-R-1400 Uncl.

PROCESSUS CINETIQUES DANS UNE SUBSTANCE
IRRADIEE. (Kinetic Processes in Irradiated
Substances). M. A. Mokul'skii. Translated
into French from Vysokomolekulyarnye
Soedineniya, 2: 119-29(1960). 34p.
(Includes original, 11p.).

Radiation Effects; Translations MC-40

C-40 NP NSA Dep.(mc); \$3.60(fs), \$1.22(mf)
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N-5

Bresler, S. Ye. and others.

DEGRADATION OF STEREOREGULAR POLYPROPYLENE. [1960] 5p. 3 refs.

Order from SLA m\$1.80, ph\$1.80

60-18426

Trans. of [Vysokomolekul'arnyye Soyedineniya] (USSR) 1960 (v. 2) no. 1, p. 130-132.

Experiments showed that polypropylene which is quite thermo-stable in a vacuum, undergoes an intense oxidative degradation on heating in the air. In the presence of oxygen there is observed no difference in degradation of the amorphous and crystalline polypropylene. Residues of titanium oxide which can be present in commercial samples of polypropylene obtained by means of Ziegler catalysts have no effect on polymer degradation. In order to inhibit the oxidative degradation of polymers it is necessary to use antioxidants which act weakly at room temperature. Di-(4-oxyphenyl) sulfide especially strongly inhibits the oxidative degradation of polypropylene. (Author)

(Chemistry--Organic, TT, v. 5, no. 3)

60-18426

1. Propene polymers--
Deterioration
2. Propene polymers--Oxidation
1. Bresler, S. Ye.

143,042

Office of Technical Services

Zil'berman, Ye. N. and Teplyakov, N. M.
SYNTHESIS OF COMPLEX POLYESTERS FROM
DINITRILES AND GLYCOLS VIA POLYIMINOESTER
HYDROCHLORIDES. 20 Apr 60 (7)p. 4 refs.
Order from LC or SLA ml\$1.80, ph\$1.80 60-18469

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 1] p. 133-135.

By interaction of dinitriles of alkanedioic and aralkane-
dioic acids with glycols in the cold and in the presence
of hydrogen chloride, there are formed polyiminoester
hydrochlorides that are transformed by hydrolysis into
complex polyesters having terminal nitrile and hydroxy
groups. Eight complex polyesters with molecular
weights of 1000-1700 were synthesized. (Author)

(Chemistry--Organic, TT, v. 5, no. 3)

60-18469

1. Esters--Synthesis
2. Cyanides--Chemical reactions
3. Glycols--Chemical reactions
1. Zil'berman, Ye. N.
- II. Teplyakov, N. M.

143,029

Office of Technical Services

Plasticization of Poly(Vinyl Alcohol)-
Styrene and Polyacrylic Acid-Styrene Graft
Copolymers, by V. A. Kargin.
RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol 2, No 1, 1960, pp 166-173.
NTC-71-11535-111

Feb 72

TT-63-23754

Uskov, I. A.

THE FILLING OF POLYMETHYLMETHACRYLATE
WITH AMINATED BENTONITE BY DIRECT ADDITION
INTO THE MONOMER; THE EFFECT OF AMINATED
BENTONITE DISPERSION IN THE MONOMER ON THE
STRENGTHENING OF PMMA; POLYMERIZATION OF
MMA WITH DISPERSED SODIUM BENTONITE

(Napolnenie Polimetilmetakrilata Aminirovannym
Bentonitom, Vvodimym Neposredstvenno v Monomer;
Vliyaniye Dispergirovannogo Aminirovannogo Bentonita v
Srede Monomera na Utverzheniye Polimetilmetakrilata,
Polimerizatsiya MMA s Dispergirovannoy Dispersiyei
Natrievogo Bentonita) tr. by R. J. Zatorski. Pts. 1-3 of
Filled Polymers. [1963] 25p (foreign text included)
22refs [CSIRO] Trans. no. 6170
Order from OIS, SLA, or FTC \$2.60 TT-63-23754

Trans. of Vsesoyuznyy Nauchnyy Soedineniya (USSR)
1960, v. 17, no. 1, p. 200-210, 723-730, 926-930
(Abstracts in English)
(Materials: Plastics, TT-63-11, no. 2) (over)

I. Uskov, I. A.
II. Title: Effect...
III. Title: Filled...
IV. Title: Polymerization...
V. CSIRO Trans-6170
VI. Commonwealth Scientific
and Industrial Research
Organization (Australia)

Approved for Release by NSA on 09-11-2013 pursuant to E.O. 13526

Uskov, I. A.

FILLED POLYMERS. I. FILLING OF POLY(METHYL METHACRYLATE) BY ANIMATED BENTONITE, ADDED DIRECTLY TO THE MONOMER. [1961]6p. Order from ATS \$9.85

ATS-69P58R

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960, v. 2, no. 2, p. 200-204.

An abstract trans. is available from LC or SLA mi\$1.80, ph\$1.80 as 60-23835, AID-60-27, 15 July 60, 1p.

DESCRIPTORS: *Methyl radicals, *Acrylic resins, *Bentonite, Polymerization, Polymers

For abstract see Technical Translations ± 682, 1960.

(Materials--Plastics, TT, v. 7, no. 10)

62-12571

I. Uskov, I. A.

II. Title: Filling ...

III. ATS-69P58R

IV. Associated Technical Services, Inc., East Orange, N. J.

Office of Technical Services

Kargin, V. A., Kabanov, V. A., and Zubov, V. P.
SYNTHESIS OF ISOTACTIC POLY(METHYL METHA-
CRYLATE) BY POLYMERIZATION OF THE FROZEN
MONOMER. [1960] 3p.
Order from ATS \$3.60

ATS-35M47R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 2, p. 303-305.

148,670

(Chemistry--Organic, TT, v. 5, no. 7)

61-12691

- I. Acrylic resins--Synthesis
- I. Kargin, V. A.
- II. Kabanov, V. A.
- III. Zubov, V. P.
- IV. ATS-35M47R
- V. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-PI-6680

Office of Technical Services

Mechanism of Oxidation of Cellulose and of Its
Approximate Models by Atmospheric Oxygen, by
O. P. Golova.
RUSSIAN, per, Vysokomolckulyarnye Soedineniya, Vol 2,
No 3, 1960, pp 337-340.
*NTIS TT 71-51002

July 71

61-14970

Korotkov, A. A. and Chesnokova, N. N.
CATALYTIC COPOLYMERIZATION OF STYRENE
WITH BUTADIENE. [1961] 14p. 12 refs.
Order from OTS or SLA \$1.60

61-14970

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 3] p. 365-374.

DESCRIPTORS: Catalysts, *Copolymerization,
*Styrenes, *Butadienes, Polymers, Chemical reactions.

I. Korotkov, A. A.
II. Chesnokova, N. N.

161773

Office of Technical Services

(Chemistry--Organic, TT, v. 6, no. 1)